Amendments to the Claims:

Claims 4, 21, 29 and 47 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (previously presented) An apparatus for applying adhesive material to one or more underside surfaces of at least one semiconductor component, comprising:

an adhesive reservoir configured to provide an exposed surface of adhesive material to only a defined portion of each of one or more underside surfaces of at least one semiconductor component positioned thereover, the adhesive reservoir comprising at least one pool chamber defined by at least one upward facing opening, the adhesive reservoir shaped such that the exposed surface of adhesive material is supplied to a precise location above the at least one upward facing opening, the adhesive material having a surface tension; and

at least one mechanism associated with the adhesive reservoir, the at least one mechanism configured to level the exposed surface of adhesive material at the precise location above the at least one upward facing opening and maintain the exposed surface of adhesive material at a substantially constant height, the at least one mechanism including at least a pump configured to supply the adhesive material to the adhesive reservoir and a control system to control the supply of the adhesive material to the adhesive reservoir to control extrusion of the adhesive material to a selectable height.

2. (previously presented) The apparatus of claim 1, wherein the at least one upward facing opening, in combination with the surface tension of the adhesive material, is configured to provide an exposed surface comprising a meniscus.

3. (previously presented) The apparatus of claim 1, wherein the at least one mechanism is configured to manipulate the surface tension of the adhesive material to flatten the exposed surface of the adhesive material.

4. (currently amended) The apparatus of claim 1, wherein the at least one mechanism is a coating stencil configured to manipulate a difference in pressure within the adhesive material and ambient air to be equal to twice the surface tension of the adhesive material divided by a radius of curvature of the adhesive material as the adhesive material is extruded through the at least one mechanism.

5. (previously presented) The apparatus of claim 1, wherein the at least one mechanism is configured to use the surface tension of the adhesive material to control surface area and thickness of the adhesive material available for application to the at least one semiconductor component.

6. (previously presented) The apparatus of claim 1, wherein the at least one mechanism further comprises at least one of a coating stencil, a wiper, a vacuum, and a height detection mechanism.

7. (previously presented) The apparatus of claim 1, wherein the at least one mechanism further comprises a coating stencil including:

a generally flat and generally horizontal top surface; and

a plurality of apertures aligned to wet the defined portion of the at least one semiconductor component with the adhesive material, the plurality of apertures sized and configured to control extrusion of the adhesive material through the coating stencil to define an area of the exposed surface of the adhesive material.

8. (previously presented) The apparatus of claim 7, wherein the coating stencil is disposed over the at least one upward facing opening of the at least one pool chamber, such that the only access from within the at least one pool chamber through the at least one upward facing opening to above the adhesive reservoir is through the plurality of apertures of the coating stencil.

9. (previously presented) The apparatus of claim 7, wherein the plurality of apertures of the coating stencil is substantially rectangular in shape.

10. (previously presented) The apparatus of claim 7, wherein the plurality of apertures of the coating stencil is substantially square in shape.

11. (previously presented) The apparatus of claim 7, wherein the plurality of apertures of the coating stencil is positioned substantially parallel to each other and is spaced so as to have a centerline pitch between each aperture of the plurality of apertures of .020 inch (.051 cm).

12. (previously presented) The apparatus of claim 11, wherein the plurality of apertures of the coating stencil numbers 23 in quantity.

13. (previously presented) The apparatus of claim 7, wherein the plurality of apertures of the coating stencil is .260 inch (.660 cm) in length and is .010 inch (.025 cm) in width.

14. (previously presented) The apparatus of claim 7, wherein the plurality of apertures of the coating stencil is sized and configured as a result of considering adhesive material viscosity.

15. (previously presented) The apparatus of claim 14, wherein the plurality of apertures of the coating stencil is sized and configured to suit an adhesive material viscosity ranging from approximately 1000 to 500,000 centipoise.

16. (previously presented) The apparatus of claim 14, wherein the plurality of apertures of the coating stencil is sized and configured to optimally accommodate an adhesive material viscosity of approximately 62,000 centipoise.

17. (previously presented) The apparatus of claim 14, wherein the plurality of apertures of the coating stencil is sized and configured to optimally accommodate an adhesive material viscosity of approximately 62,000 centipoise at a temperature of approximately 77° F (25° C).

18. (previously presented) The apparatus of claim 7, wherein the plurality of apertures of the coating stencil is arranged generally parallel to each other and is spaced so as to have a centerline pitch between each aperture of the plurality of apertures of .020 inch (.051 cm).

19. (previously presented) The apparatus of claim 18, wherein the plurality of apertures of the coating stencil numbers 23 in quantity.

20. (previously presented) The apparatus of claim 18, wherein the plurality of apertures of the coating stencil is .260 inch (.660 cm) in length and is .010 inch (.025 cm) in width.

21. (currently amended) The apparatus of claim 7, further comprising a vacuum under ~~on a bottom side of~~ the coating stencil.

22. (previously presented) The apparatus of claim 1, further comprising at least one second mechanism configured to bring the defined portion of the at least one semiconductor component in contact with the exposed surface of adhesive material.

23. (previously presented) The apparatus of claim 1, wherein the adhesive reservoir further comprises an adhesive circulation mechanism configured to circulate the adhesive material and maintain uniformity of the adhesive material.

24. (previously presented) The apparatus of claim 1, wherein the at least one mechanism is attached to the adhesive reservoir.

25. (previously presented) The apparatus of claim 1, wherein the at least one semiconductor component comprises at least one lead finger on a lead frame.

26. (previously presented) An apparatus for applying viscous material to one or more underside surfaces of at least one semiconductor component, comprising:

a reservoir for providing an exposed surface of viscous material to only one or more underside surfaces of at least a portion of at least one semiconductor component positioned thereover, the reservoir comprising at least one pool chamber in fluid communication with a viscous inflow chamber, the at least one pool chamber defined by at least one upward facing opening, the reservoir shaped such that the exposed surface of viscous material is supplied to a precise location above the at least one upward facing opening, the viscous material having a surface tension;

at least one first mechanism configured to provide the viscous material to a desired selectable height above the at least one upward facing opening, the at least one first mechanism comprising at least a pump for supplying the viscous material to the reservoir and a control system for controlling the supply of the viscous material to the reservoir; and

at least one second mechanism associated with the reservoir, the at least one second mechanism configured to level the exposed surface of viscous material above the at least one upward

facing opening, to maintain the exposed surface of viscous material at a substantially constant height and to increase the effective exposed surface of viscous material.

27. (previously presented) The apparatus of claim 26, wherein the exposed surface comprises a meniscus.

28. (previously presented) The apparatus of claim 26, wherein the at least one second mechanism is configured to manipulate the surface tension of the viscous material to flatten out the exposed surface of the viscous material.

29. (currently amended) The apparatus of claim 26, wherein the at least one second mechanism is a coating stencil configured to manipulate the difference in pressure within the viscous material and ambient air to be equal to twice the surface tension of the viscous material divided by a radius of curvature of the viscous material as the viscous material is extruded through the at least one second mechanism.

30. (previously presented) The apparatus of claim 26, wherein the at least one second mechanism is configured to use the surface tension of the viscous material to control surface area and thickness of the viscous material available for application to the at least one semiconductor component.

31. (previously presented) The apparatus of claim 26, wherein the at least one second mechanism further comprises at least one of a coating stencil, a wiper, a vacuum, and a height detection mechanism.

32. (previously presented) The apparatus of claim 26, wherein the at least one second mechanism comprises at least one coating stencil including:
a generally planar horizontal top surface; and

a plurality of openings positioned to wet the at least a portion of the at least one semiconductor component with the viscous material, the plurality of openings sized and configured to control extrusion of the viscous material through the at least one coating stencil to further increase the exposed surface of the viscous material.

33. (previously presented) The apparatus of claim 32, wherein the at least one coating stencil is disposed over the at least one upward facing opening of the at least one pool chamber, such that the only access from within the at least one pool chamber through the at least one upward facing opening to above the reservoir is through the plurality of openings of the at least one coating stencil.

34. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is configured to apply the viscous material to only a selected portion of the at least one semiconductor component.

35. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is generally rectangular in shape.

36. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is generally square in shape.

37. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is positioned generally parallel to each other and is spaced so as to have a centerline pitch between each opening of the plurality of openings of .020 inch (.051 cm).

38. (previously presented) The apparatus of claim 37, wherein the plurality of openings of the at least one coating stencil numbers 23 in quantity.

39. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is .260 inch (.660 cm) in length and is .010 inch (.025 cm) in width.

40. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is sized and configured as a result of considering viscous material viscosity.

41. (previously presented) The apparatus of claim 40, wherein the plurality of openings of the at least one coating stencil is sized and configured to manage a viscous material viscosity ranging from approximately 1000 to 500,000 centipoise.

42. (previously presented) The apparatus of claim 40, wherein the plurality of openings of the at least one coating stencil is sized and configured to optimally accommodate a viscous material viscosity of approximately 62,000 centipoise.

43. (previously presented) The apparatus of claim 40, wherein the plurality of openings of the at least one coating stencil is sized and configured to optimally accommodate a viscous material viscosity of approximately 62,000 centipoise at a temperature of approximately 77° F (25° C).

44. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is arranged generally parallel to each other and is spaced so as to have a centerline pitch between each opening of the plurality of openings of .020 inch (.051 cm).

45. (previously presented) The apparatus of claim 44, wherein the plurality of openings of the at least one coating stencil numbers 23 in quantity.

46. (previously presented) The apparatus of claim 32, wherein the plurality of openings of the at least one coating stencil is .260 inch (.660 cm) in length and is .010 inch (.025 cm) in width.

47. (currently amended) The apparatus of claim 32, wherein the at least one first mechanism comprises a vacuum under ~~on a bottom side of~~ the at least one coating stencil.

48. (previously presented) The apparatus of claim 26, further comprising at least one third mechanism configured to bring the at least one semiconductor component in contact with the exposed surface of viscous material.

49. (previously presented) The apparatus of claim 26, wherein the reservoir further comprises a circulation mechanism configured to circulate the viscous material and maintain uniformity of the viscous material.

50. (previously presented) The apparatus of claim 26, wherein the at least one second mechanism is attached to the reservoir.

51. (previously presented) The apparatus of claim 26, wherein the at least one semiconductor component comprises at least one lead finger of a lead frame.